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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,848	04/30/2002	Andrea Nascimbene	3573-14	2473

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EXAMINER

LE, DANH C

ART UNIT PAPER NUMBER

2683

DATE MAILED: 08/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/049,848

Applicant(s)

NASCIMBENE, ANDREA

Examiner

DANH C LE

Art Unit

2683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 April 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Figure 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 2 and 3 are objected to because of the following informalities: "1." Should change to --1--. Appropriate correction is required.

Specification

3. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites the limitation "said ordinary, pre-existing and pre installed radio access radio terminal" in claim 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipate by Helmkamp (US 5,265,150).

As to claim 1, Helmkamp teaches an add-on radio repeater for TDMA point-multipoint radio communication systems for fixed services and fixed wireless access applications, characterized in that it consist of ordinary radio access terminal, to which the functionality of a repeater is given upon request (figure 1, repeaters 110-112, col.3, line 59-col.4, line 31 and some of the fixed terminals are tasked to serve as radio repeaters so that area coverage may be expanded over that of a system employing a single base unit. With multiple stages or levels of repeaters, this coverage is

significantly expanded. With two repeater levels, for example, the effective radius of coverage is increased approximately by a factor of 3 over a single base system).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Helmkamp in view of Scheffe (US 6,078,787).**

As to claim 2, Helmkamp teaches an add-on radio repeater as claimed in claim 1. Helmkamp fails to teach the functionality of a repeater is given to the said ordinary, pre-existing and pre-installed radio access terminal by means of adding an external unit, comprising a new antenna and suitable co-ordination means. Scheffe teaches the functionality of a repeater is given to the said ordinary, pre-existing and pre-installed radio access terminal by means of adding an external unit, comprising a new antenna and suitable co-ordination means (col.2, lines 12-21 and col. 3, lines 1-51 and the interface unit 104 performs the function co-ordination of relaying the signals from the network antenna 102 and the relay antenna 103. In a situation where the network radio connection 171 comprises a first radio signal frequency, and the local connection 181 utilizes a second frequency interval, the interface unit 104 transforms between the two frequency intervals). Therefore, it would have been obvious to one of ordinary skill in

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the art at the time the invention was made to provide the teaching of Schefte into the system of Helmkamp in order to extend the cell coverage in a cellular communication system.

As to claim 3, the combination of Helmkamp and Schefte further teaches the repeater as claim in claim 2, wherein the said external unit does not affect the radio access terminal and can be removed at any time (Schefte, col.5, lines 33-51).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Schefte into the system of Helmkamp in order to remove the add-on antenna when the coverage area is less significant and deploying in the significant coverage area.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A. Hyziak et al (US 6,125,279) teaches method and apparatus for extending coverage in cellular communication system.

B. Collomby (US 6,188,719) teaches the radio-communication system repeater.

C. Weaver, Jr. et al (US 6,108,364) teaches the time division duplex repeater for use in a CDMA system.

D. Kim (US 6,292,652) teaches the repeater having frequency conversion.

E. Uratani (US 5,850,593) teaches mobile communication for a mobile station near or outside a service area of a base station.

F. Hyziak et al (US 6,125,279) teaches method and apparatus for extending coverage in cellular communication system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANH C LE whose telephone number is 703-306-0542. The examiner can normally be reached on 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, WILLIAM TROST can be reached on 703-308-5318. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Danh", with a horizontal line underneath it.

July 26, 2004

DANH CONG LE
PATENT EXAMINER